

## Changing trends in dental education - Paradigm shift

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### ABSTRACT

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Current training in dental education in India is mostly traditional. The method followed all over is predominantly didactic i.e. lectures and laboratories for skills and clinical training. It is time to introspect and analyze the reasons our graduates are appearing for entrance examinations and repeating their graduation in various parts of the world. We need to assess our training program and see if it meets the needs of students and community; to see how it matches to the various dental training programs globally. Our fraternity has to be aware of the global changes that have occurred in the field of education. This will enable them to improve, innovate and strengthen their skills and the program. There are many challenges facing us. They range from teaching learning methods, curriculum innovations, assessment techniques and improving attitudes and communication skills. This article will be a preliminary article on dental education in India and a series of articles will follow to address some important and pressing issues.

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### INTRODUCTION

In response to myriad changes such as changing social determinants of health, resource constraints, exponential rise in technology and increase in health care, dental education has also changed. In essence, over the last century, dental education has evolved from a self-taught and self-proclaimed "profession" to an actual one with formal education and recognized competencies. During this evolution, the issues of dentistry's relationship with medicine, the movement toward lifelong learning, critical thinking, and discovery culminating in an evidence-based approach to education and clinical practice have taken center stage.<sup>1</sup>

Many academicians and educators have been voicing their dissatisfaction with the quality of recent graduates. On the other hand, it is a serious challenge to improve the level of student satisfaction with the curriculum and learning environment.<sup>2</sup> It is imperative that the skills and roles of today's dentists be aligned to meet the needs of the society and be effective so as to ensure that high quality dental care is available to all.

There is a high level of unmet demands for oral health care in our country.<sup>3</sup> The need of the hour is to ensure oral health care services to all and improvising the level of oral health care services by empowering dental graduates with knowledge, skills and attitude required. To achieve this we need to look at some crucial factors.

### Teaching learning methods

The process of education requires a holistic approach comprising of teaching, learning and

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assessment. Knowledge, communication, critical appraisal skills, attitudes, behaviours and performance related to the practice of evidence-based oral health care play vital role in the practice of evidence based dentistry.<sup>4</sup>

Globally different schools of thought have emerged. Problem based learning was considered to be flagship of all learning methods. In problem based learning, learning is achieved through challenging, open ended problems with a change in focus from teachers and teaching, as in conventional programs, to learners and learning. Some regard problem based learning as resource intensive and not displaying cost efficiency. This gave rise to the concept of case based learning. Although problem based learning and case based learning share some common goals, case based format requires students to recall previously covered materials to solve cases which are based on clinical practice.<sup>5</sup>

Outcome based curriculum, especially competence based are being implemented in all parts of the world. Outcome-based education is similar to competency-based education. It focuses on learning outcomes and not on learning objectives. Competence in dental education is a lifelong process nurtured with years of practice and reflection. Competency based learning consists of clearly specified outcomes of learning, as against the traditional approach, which was mainly discipline-based.<sup>4</sup>

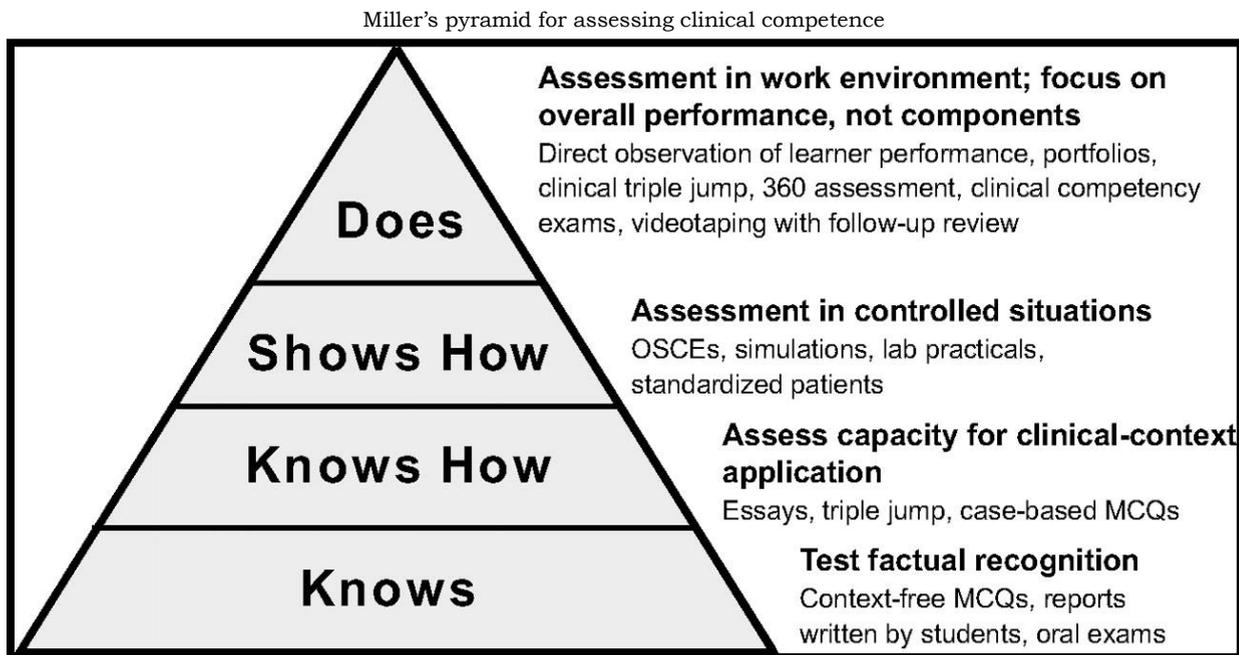
In inquiry-based teaching-learning (IBTL), there is greater emphasis on the process of learning and development of sciences as inquiry. Inquiry-based teaching-learning is an open ended and adaptive process of learning.<sup>6</sup>

The ultimate goal of education is to train students with appropriate learning strategies and intellectual tools thus empowering them with knowledge, skills and attitudes that will serve the community.

### Innovative assessment methods

In dental education alternative methods for assessment of student performance have tended to emerge as more innovative teaching methodologies have opened doors to new thinking about educational process<sup>4</sup>.

The pyramid by George Miller helps in understanding of important concepts related to assessment in medical and health professions education<sup>7</sup>.



### Barriers to improvisation of indian dental education

Lack of accreditation and licensure system, differences in dental education models, curricula and competencies, the slow implementation of technological advances by dental institutions are all barriers that limit improvisation of dental education system in India. There is also evidence that many dental colleges are short on well trained faculty. Indeed, the rapid growth in the student body and in the number of dental colleges of the type seen in India is highly likely to result in shortage of qualified faculty.<sup>3</sup> Qualified faculty empowered to train dental graduates with innovative teaching learning methods is the need of the hour.

### Paradigm shift

Traditionally, teaching learning method predominantly consisted of didactic lectures with minimum participation of and interaction with students which only encouraged rote learning. Little opportunity is given for students to acquire a sense of "connectedness" between biomedical science courses, generally completed during their first two years, and clinical experiences required for graduation and practise thereafter. Although integration of science with clinical practice is a key objective of any dental curriculum, students often perceive that the mantra of survival in school is to pass the courses by rote

memorization and to discover the relevance of this material in actual practice. The current practises and attitudes of students as well as faculty need to be changed and a shift is required towards evidence based dentistry with early clinical exposure. As the dental curriculum shifts from primarily lectures in the first year to clinical training in later years, a new learning environment needs to be created<sup>2</sup>.

### CONCLUSION

The disease patterns and demographics are changing, but diversity in dental education remains stagnant. Basic and clinical sciences are still not integrated. Knowledge and technology is exploding and to keep pace with it education system needs to revolutionise<sup>1</sup>. We are moving towards a new health care system and thus competencies for clinical practice need to be redefined. Research, critical thinking, and scientific method need to be woven into the fabric of education and clinical practice. Transfer of scientific discovery to education and practice is too laid back which needs to change<sup>8</sup>. The future of dentistry depends on the production of educationally qualified, culturally competent, and ethical dentists who are grounded in expert technical skills and sound medical knowledge.

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